



## COMMONWEALTH of VIRGINIA

*Department of Health*  
*Division of Shellfish Sanitation*  
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### **LANCASTER, DEEP AND MULBERRY CREEKS Growing Area # 23**

**Lancaster and Richmond Counties**

#### **Shoreline Sanitary Survey**

**Date:** August 20, 2003

**Survey Period:** November 22, 2002 - January 14, 2003

**Total Number of Properties Surveyed:** 584

**Surveyed By:** Gary A. Wood

#### **SECTION A: GENERAL**

This survey area extends from Reference Point 23 at the end of Route 653 (Bewdley Road) to Reference Point 24 at Tarpley Point, including the Rappahannock River shoreline between these two points, Deep Creek, Mulberry Creek, Lancaster Creek, Morattico Creek and all their tributaries.

Elevations rise from less than 5 feet at the shoreline around Belle Island, Morattico and Simonson to approximately 100 feet at the outer boundary of the survey area (Route 3). The population in the area is sparse to moderate around Morattico, Nuttsville, Litwalton and Simonson. Population density varies with the season and many homes along the waterfront are occupied only on weekends and/or during the warmer months. Crab shedding operations and an oyster repacking plant occur along the Rappahannock River shoreline.

Meteorological data indicated that .11 inches of rain fell from November 21 through November 30, 2002, 2.41 inches from December 1 through 31, 2002, and 1.25 inches from January 1 through January 14, 2003, for a total of 3.77 inches during the survey period.

The current restrictions on shellfish harvesting are Condemned Shellfish Area #120, Lancaster, Morattico and Mulberry Creeks, effective July 17, 2001; Condemned Shellfish Area 121, Rappahannock River: Deep Creek, effective July 17, 2002. A copy of the current condemnation notices and maps are attached to this report.

Since the last survey was completed in August 1995, the number of animal pollution sources has increased from 3 to 6. Four of the sites contribute pollution directly to waterways in Area 23. Sites that produce industrial waste have decreased from 5 to 3. In

this category, Bunny's Service Center, listed in the last survey, no longer maintains an aboveground storage tank for used oil, but Whelan's Marina (#49) does have a 2,000-gallon above ground gasoline tank. Whelan's was, therefore, added to this survey as an indirect source of industrial pollution.

All but one of the seafood processors (B.G. Smith and Sons, #48) which discharged waste water into the waterways in past years have either gone out of business or are restricting their activities to crab shedding. Included in this category is Simonson Seafood (#40). Simonson is currently only shedding crabs, but the business has a valid discharge permit for wastes associated with crab cutting, shellstock washdown, oyster shucking and crab picking. Because, unlike the other processors in Area 23, Simonson has potential to re-enter these activities, it was retained as an indirect source of industrial waste.

Information in this report is gathered and used primarily by the Division of Shellfish Sanitation, Virginia Department of Health, in order to fulfill its responsibilities of shellfish growing area supervision and classification. Data in the report are also made available to other agencies participating in shellfish program activities and other interested parties.

Report copies are provided to the local health department for corrective action of deficiencies listed on the summary page in Section B. 2. and B. 3., and the Department of Environmental Quality, Water Regional Office for possible action at properties listed on the summary page in Section B.1.

This report lists only those properties that have a sanitary deficiency or have other environmental significance. Individual field forms with full information on properties listed in this report are on file in the Richmond office of the Division of Shellfish Sanitation and are available for reference until superseded by a subsequent survey of the area.

## **SECTION B: SEWAGE POLLUTION SOURCES**

### **SEWAGE TREATMENT FACILITIES**

- None -

### **ON-SITE SEWAGE DEFICIENCIES**

2. NO FACILITIES - Occupant: Mark Lee, adjacent to 347 Leetown Road, Nuttsville 22528. Owner: Estate of Noble Lee, c/o Tony Lee, General Delivery, Nuttsville, 22528. Dwelling- Black and yellow mobile home. 2 persons. Uses portable toilet. Sanitary notice issued 11-22-02 to field #10.
3. NO FACILITIES - Martha E. (Rollins) Lee, 347 Leetown Road, Nuttsville 22528. Dwelling- Red asbestos shingles, 1 story with white shutters. 1 person. Sanitary notice issued 11-22-02 to field #11.
4. NO FACILITIES - Location: Adjacent to 353 Leetown Road, Nuttsville 22528. Owner: Raymond J. Congour, Jr., 278 Meadowbrook Lane, Lancaster 22503. Dwelling- Tan mobile home with pink trim and blue door. No contact. Sanitary notice issued 11-22-02 to field #13.
5. NO FACILITIES - Location: Adjacent to 301 Leetown Road, Nuttsville 22528. Owners: Scott C. Hardaway, Jr., and James R. Gunn, Box 650, Gloucester 23061. Dwelling- Blue mobile home. No contact. Floor of pit privy collapsing making it unusable and exposing contents. Sanitary notice issued 11-22-02 to field #27.
6. CONTRIBUTES POLLUTION - Leon Lee, 171 Leetown Road, Nuttsville 22528. Dwelling- White vinyl siding, 1 story with white trim. No contact. Effluent erupting to ground around septic tank curbing. Sanitary notice issued 11-22-02 to field #30.
7. NO FACILITIES - Eula Blue, 101 Leetown Road, Nuttsville 22528. Dwelling- Gray hardboard siding, 1 story with red shutters. 1 person. Uses bucket and empties it into an collapsing privy. Sanitary notice issued 11-22-02 to field #33.
8. NO FACILITIES - Location: 50 Gaines Road, Nuttsville 22528. Owners: James and Elnora Owens, 84 Gaines Road, Nuttsville 22528. Dwelling- Blue and gray mobile home. No Contact. Sanitary notice issued 12-16-02 to field #320.
9. NO FACILITIES - Occupant: Elnora Owens, 84 Gaines Road, Nuttsville 22528. Owner: Leah Towles, Estate, General Delivery, Nuttsville 22528. Dwelling- White mobile home with brown shutters. 3 persons. Sanitary notice issued 1-2-03 to field #319.
10. NO FACILITIES - Lancaster County, 200 Gaines Road, Nuttsville 22528. Solid waste transfer point. 1 employee. Portable toilet in use on property. Sanitary notice issued 12-18-02 to field #321.
11. CONTRIBUTES POLLUTION - Occupant: Robintine Brown, 1032 Nuttsville Road, Nuttsville 22528. Owner: William Miles, Estate, c/o John Washington Carter, P.O. Box 20, Norma, N.J. 08347. Dwelling- White mobile home with blue shutters. 4 persons. Pit privy full to riser. Sanitary notice issued 12-16-02 to field #322.

12. CONTRIBUTES POLLUTION (Kitchen or Laundry Wastes). Location: 732 Nuttsville Road, Nuttsville 22528. Owner: John B. Thomas, c/o Shirley Thompson, 6003 Baywood Avenue, Baltimore, MD 21209. Dwelling- White wood sided 1 ½ story with silver tin roof. No contact. Laundry waste drains to ground through 1 ½ inch PVC pipe. Sanitary issued 12-16-02 to field #328.
13. NO FACILITIES - Occupant: Victory Temple, Annie Gaskins, Pastor, 1252 Morattico Road, Lancaster 22503. Owner: Jane L. Savin, 1210 Morattico Road, Lancaster 22503. Church- White block 1 story with black trim. No contact. Portable toilet on property. Sanitary notice issued 12-18-02 to field #382.
14. NO FACILITIES - Charles Williams, 1916 Morattico Road, Lancaster 22503. Dwelling- Gray vinyl siding, 1 story with black shutters. 2 persons. Property has no drainfield. Sanitary notice issued 12-18-02 to field #375.
15. NO FACILITIES- Occupant: Lloyd E. Lee, 42 Harvest Lane, Lancaster 22503. Owner: James V. and Bessie L. Ball, 2309 Morattico Road, Lancaster, 22503. Dwelling- White mobile home with blue shutters. No contact. Portable toilet on property. Sanitary notice issued 12-17-02 to field #348.
18. CONTRIBUTES POLLUTION (Kitchen or Laundry Wastes). Lawrence Williams, 4135 Morattico Road, Lancaster, 22503. Dwelling- Red brick 1 story with pink shutters and cream trim. 2 persons. Laundry on back porch drains to ground. Sanitary notice issued 11-25-02 to field #71.
19. CONTRIBUTES POLLUTION, ***DIRECT*** - Harold Ruble, 168 Creekside Drive, Lancaster, 22503. Dwelling- Brown vinyl siding, 1 ½ story with green trim. 2 persons. Effluent erupting from drainfield flows to Mulberry Creek. Sanitary notice issued 11-25-02 to field #83.
25. NO FACILITIES - Morattico Post Office, Morattico 22523, Lee Scripture, Jr., Post Master. Post Office- Gray shingle siding, 1 story with white trim. 1 employee. Portable toilet on property. Sanitary notice issued 12-3-02 to field #154.
27. NO FACILITIES - Location: 6931 Morattico Road, Morattico 22523. Owner: Eugene and Tina Deschamps, 10900 Nash Road, Chesterfield, VA 23838. Dwelling- White shingle siding and tarpaper, 1 story with red and green trim. No contact. Sanitary notice issued 12-4-02 to field #160.
28. CONTRIBUTES POLLUTION - Location: 6904 Morattico Road, Morattico 22523. Owner: Deborah H. Lewis, 2905 Quail Challenge Court, Glen Allen 23060. Dwelling- White shingle siding, 2 story with blue trim. No contact. Plywood top to septic tank. Effluent over drainfield within 50 feet of marsh. Temperature at inspection was 25 degree F., and effluent on drainfield was frozen. Sanitary notice issued 12-4-02 to field #161.
29. CONTRIBUTES POLLUTION - Location: 202 Saltwater Drive, Morattico 22523. Owner: Walter C. Posey, 6000 Franconia Road, Alexandria 22310. Dwelling- Yellow aluminum siding, 1 story with white trim. No contact. Cracked septic tank lid exposing contents. Sanitary notice issued 12-4-02 to field #174.

30. CONTRIBUTES POLLUTION (Kitchen or Laundry Wastes) - Polly Crabbe, 171 Pauline Lane, Morattico 22523. Dwelling- White wood siding, 2 story with green shutters. 1 person. Unapproved top to grease trap. Sanitary notice issued 12/9/02 to field #216.

31. CONTRIBUTES POLLUTION - Cardell D. Owens and Shelia L. Levere, 5548 Morattico Road, Lancaster 22503. Dwelling- Pink and tan asbestos shingle siding, 1 story with yellow aluminum awnings. No contact. Pit privy full to riser. Human feces on ground under overturned well curbing; and

CPKL - No cover on grease trap. Sanitary notice issued 12-10-02 to field #219.

32. CONTRIBUTES POLLUTION - Occupant: Anthony Owens, 5526 Morattico Road, Lancaster 22503. Owner: Addie Rich, 5536 Morattico Road, Lancaster 22503. Dwelling- Gray asbestos shingles and white wood siding, 1 story with blue shutters. 2 persons. Toilet drains directly to pit in backyard. Pit is covered only with a sheet of plywood; and

CPKL - Washing machine outside house drains to ground. Sanitary notice issued 12-10-02 to field #221.

37. CONTRIBUTES POLLUTION - Lloyd E. Laws, 1257 Simonson Road, Farnham 22460. Dwelling- Gray block 1 story with white shutters and trim. No contact. Lid to septic tank pried open exposing contents. Sanitary notice issued 12-19-02 to field #423.

39. NO FACILITIES - Robert P. and Molly J. Pinner, 3118 Simonson Road, Farnham 22460. Dwelling- White trailer with orange and gold stripe. No contact. Portable toilet behind trailer. Trailer is on jacks with propane hook-up and other signs of habitation, most likely on a part-time basis. Sanitary notice issued 1-2-03 to field #475.

41. CONTRIBUTES POLLUTION, **Direct** - Location: 387 Indian Banks Road, Farnham 22460. Owner: Russell G. and Betty J. Acree, Box 27, Sharps 22548. Dwelling- White wood siding, 2 story. Not occupied. Owner visits property to tend to sheep and machinery that is stored on property. During these visits, he uses the pit privy. Pit privy is full to riser. The floor is collapsing exposing contents. Effluent is leaching to Morattico Creek over a distance of 10 feet at 10 feet elevation. Sanitary notice issued 1-6-03 to field #483.

**POTENTIAL POLLUTION**

7. Hudnall W. and Sharon R. Conley, 3101 Morattico Road, Lancaster 22503. Dwelling- White mobile home with black shutters and red trim in the rear. No contact. Assorted solid waste scattered over the property including approximately 25 junked vehicles, radiators, tires, and batteries on approximately 1.5 acres.
33. Kenneth and Ruth Gaskins, 1259 Teller Ave., Bronx, N.Y. 10456. Location: 105 Heaggans Road, Farnham 22460. Dwelling- Red brick 1 story with white shutters and trim. No contact. 1 ½ inch white PVC pipe from house to ground. No evidence of discharge.
34. John E. Gordon, 225 East Gilpen Ave., Norfolk 23503. Location: 2291 Historyland Highway, Farnham 22460. Dwelling- White vinyl siding 1 story with black trim. No contact. 2 inch white PVC pipe venting waste stack is cut off at the exterior foundation. Potential for overflow exists but no pollution noted.
35. Ellis G. & Shirley P. Willmore, P.O. Box 156, Farnham 22460. Gray recreational vehicle. 2 persons. Waste line from RV is routed to septic tank through the top, which was partially open at inspection. Occupants to relocate line with 2 weeks. No evidence of pollution noted.
36. Winona R. Phillips, c/o George Jenkins, Box 332, Warsaw 22572. Location: 733 Simonson Road, Farnham 22460. Dwelling- Red brick 1 ½ story with basement and black and white trim. No contact. Top to septic tank open. House not occupied. No evidence of pollution.
43. Sydney H. and Laura E. Verinder, 925 Fairway Drive, N.E., Vienna 22180. Dwelling- White vinyl siding 1 story on pilings. No contact. 2 inch white PVC pipe drains clear fluid from unknown source.
47. Virginia Lee, 3096 Hales Point Road. Location: 3148 Hales Point Road, Farnham 22460. Dwelling- Yellow block 1 story with green shutters and white trim. No contact. Pit privy full to riser. House is not habitable and there is no evidence of recent occupation. No leakage from privy at the time of inspection.

**SECTION C: NON-SEWAGE WASTE SITES****INDUSTRIAL WASTES**

40. Simonson Seafood, at the end of Simonson Road, Route 606. Owner: A.D. Davis, Box 248, Warsaw 22572. No contact. White block 1 story. Crab shedding operation. Maintains permit VAG 524052 issued by the Department of Environmental Quality (DEQ) to directly discharge wastewater into Morattico Creek from crab cutting, shellstock washing, oyster shucking and crab picking.
48. **Direct** - B.G. Smith and Sons Oyster Company, Box 69, Sharps 22548. Business-ice making and shellstock repacker (VA230RP). Discharges waste water from shellstock repacking directly to Morattico Creek under permit # VAG 524001 issued by DEQ.
49. Whelan's Marina and Campground, 3993 Hales Point Road, Farnham 22460. J.M. Whelan, Owner. Commercial marina and campground. 8 employees. Maintains a 2,000-gallon above ground gasoline tank for sale to power boat customers of the marina. The tank has no berm or other device around it to contain spills.

**SOLID WASTE DUMPSITES**

10. County of Lancaster, 200 Gaines Road, Nuttsville 22528. Solid waste transfer point built on a closed landfill. The site is approximately 5 acres in size. 4 recycle bins and 1 compactor are located on the site. Solid waste that is too big for the compactor (e.g., appliances, metal shelving) or inappropriate for the compactor are temporarily stored on site until they can be removed.

## SECTION D: BOATING ACTIVITY

### MARINAS

49. Whelan's Marina and Campground, 3993 Hales Point Road, Farnham 22460. J.M. Whelan, Owner. Commercial marina and campground. 8 employees. Present at the time of the survey were 20 pleasure boats less than 26 feet in length and 2 pleasure boats between 26 and 39 feet in length. In dry storage were 39 pleasure boats less than 26 feet in length and 12 pleasure boats between 26 and 39 feet. Additionally, there were 7 pleasure boats less than 26 feet that were on site as part of the new boat sales inventory. Boating services include fuel (from a 2,000 gallon above ground fuel tank), water, electricity, and in-out ramp, hoist, boat repair facility and a portable pump out for holding tanks and a dump station. In addition to the 2,000-gallon fuel tank, there was a 250-gallon above ground used oil tank on the property. Neither tank was surrounded by a berm or other type of containment structure. A commode, lavatory and shower are provided for men; identical facilities are provided for women. These sanitary facilities are for the use of clients and staff. Waste is disposed of in a drainfield adjacent to the marina.

There are 62 dwellings on the property, including 9 houses and 53 occupied campsites<sup>1</sup>. All the dwellings on the property utilize two large drainfields. All hookups appeared to be well maintained and in good working order.

### OTHERS PLACES WHERE BOATS ARE STORED

2. W. R. Pittman & Son, 1043 Bewdley Road, Lancaster 22503. Location: 1758 Bewdley Road, Lancaster. White block 2 story, former oyster plant. Part of the facility also houses a crab shedding operation that operates in season. No contact. Present at the time of survey were 1 work boat between 26' and 39', 2 work boats less than 26' and 2 pleasure boats less than 26'. The two pleasure boats were in dry storage. The workboats were tied to the pier. Space available for 8 boats in the water. There are no sanitary facilities available at this site. A ramp, water and electricity are available.
16. Belle Isle State Part, Virginia Department of Parks, end of Route 683. No contact. Double boat ramp on Deep Creek, with temporary moorage for 6 boats. No boats present at time of survey. Sanitary facilities for men are 2 commodes, 2 urinals and 3 lavatories; for women, 4 commodes and 3 lavatories. A dump station for portable toilets is available. Rinse water is also available. Waste is pumped to an adjacent drainfield.
20. Roger L. and David Parks, 6113 Morattico Road, Lancaster 22503. Location: End of Waterview Road. White block building used for crab shedding operation. No contact. An inaccessible privy is on the property. Up to 12 moorings along a bulkhead. Present at the time of survey were 5 workboats less than 26 feet in length and 4 workboats between 26 and 39 feet. Water was available to boats from a hose hookup at the building, but no other services were provided.
22. Barrack Seafood, Owners: Edwin C. and Janet J. Barrack, 480 Mulberry Creek Road, Lancaster 22503. 1 employee. White block 1 story used primarily for crab shedding. Up to 8 moorings along bulkhead and at the finger pier. Present at the time of the

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<sup>1</sup> E.g., trailer campers or recreational vehicles.



survey were 3 work boats under 26 feet moored to the bulkhead and 2 pleasure boats less than 26 feet moored to the finger pier. In-out ramp at the finger pier. Water and electricity available.

23. RCV Seafood, Inc., 556 Riverside Drive, Morattico 22523. Owner: Weston C. Conley, Box 85, Morattico 22523. Crab processing plant (VA-35C). No contact. 8 slips and 8 moorings. Present at the time of the survey was 1 workboat less than 26 feet in length. Vault privy available on property but locked at the time of inspection. It appears to be well maintained and in good working order. Separate accommodations available for men and women. Water and electricity are also available. A ramp in poor repair was also on the property.
24. Shelton Seafood, 187 Riverside Drive, Morattico 22523. Owner: George W. Shelton, Box 75, Morattico 22523. Galvanized steel 1 story crab shed. No contact. No boats present during survey. Up to 4 moorings. There are no boating services or sanitary facilities at this location.
48. B.G. Smith & Son Oyster Company, 787 Oakley Lane, Sharps 22548. Owner: B.G. Smith, Jr., and James F. Smith, Box 69, Sharps, 22548. Shellstock repacker (VA230RP). 1 workboat less than 26 feet present at the time of the survey. Up to 6 moorings. Boating services provided are in-out ramp, fuel, water and electricity. Sanitary facilities provided are 6 vault privies (2 for men, 4 for women). All privies appear to be well maintained. Portable marine toilets may be emptied into a privy fitted with a dump station.

#### **UNDER SURVEILLANCE**

21. Larry W. and Shirley A. Terry, 5609 S. 8<sup>th</sup>. Street, Arlington, VA 22204. Location: End of Waterview Street. (Formerly, Piney Island Seafood). White block building formerly used as an oyster-processing house. No contact. Up to 25 moorings along bulkhead. Present at time of survey was one pleasure boat less than 26 feet in length in dry storage. No other services were provided. Toilet facilities for women were locked. Toilet facilities for men had a door that was off the hinges making it inaccessible.
26. T.C. and Ann C. Bromley, 373 Riverside Drive, Morattico 22523. Gray vinyl sided crab shed. No contact. 1 workboat less than 26 feet present at the time of the survey. Up to 4 moorings along finger pier. There are no boating services or sanitary facilities at this location.
40. Simonson Seafood, at the end of Simonson Road, Route 606. Owner: A.D. Davis, Box 248, Warsaw 22572. No contact. White block 1 story. Crab shedding operation. 3 work boats less than 26' present at survey. 1 vault privy for men and 1 for women. Both appeared to be well maintained. No other services provided.

**Section E: CONTRIBUTES ANIMAL POLLUTION**

38. J.C. Berger, 2325 Simonson Road, Farnham 22460. Dwelling- Red brick 1 ½ story with white trim. 4 persons. Present at the time of survey were approximately 25 sheep. Manure rots in pasture approximately 100 yards from Lancaster Creek. A small percentage of the manure is collected and composted.
41. **Direct** - Location: 387 Indian Banks Road, Farnham 22460. Owner: Russell G. and Betty J. Acree, Box 27, Sharps 22548. Dwelling- White wood siding, 2 stories on approximately 10 acres. Present at the time of survey were 17 sheep with direct access to Morattico Creek.
42. **Direct** - Location: Agricultural pasture and barn adjacent to 1990 Simonson Road, Farnham. Owner: Judson Roy, Jr., c/o Milton E. and Gizzel Lewis, 5105 Farnham Creek Road, Warsaw 22572. No contact. Present at the time of survey were 3 Black Angus cattle with direct access to a tributary of Morattico Creek.
44. **Direct** - S.W. Pierson, 2500 Hales Point Road, Farnham 22460. Dwelling- Red brick 1 story with white shutters and trim. No contact. Present at the time of survey were 5 cattle with direct access to a tributary of Morattico Creek.
45. Stephen T. Lowe, 422 Fox Hunters Hill Rd, Warsaw 22460. Location: 2159 Hales Point Road, Farnham 22460. Dwelling- Blue wood siding, 2 stories with blue shutters and white trim. Present at the time of survey were 4 head of cattle and approximately 30 goats. Fenced pasture is within 50 yards of Morattico Creek at an elevation of 5 feet. Manure rots in the field. Manure from barns is collected but final disposition is unknown.
46. **Direct** - Anthony L. Montgomery, 2737 Hales Point Rd., Farnham 22460. Dwelling- Tan mobile home with blue trim. Present at the time of survey were 10 un-penned dogs with direct access to Morattico Creek.

**SUMMARY****AREA 23**

Lancaster, Deep and Mulberry Creeks

January 14, 2003

**SECTION B: SEWAGE POLLUTION SOURCES****1. SWEAGE TREATMENT FACILITIES**

0 - DIRECT - None

0 - INDIRECT - None

0 - B.1. TOTAL

**2. ON-SITE SEWAGE DEFICIENCIES**

Correction of deficiencies in this section is the responsibility of the local health department.

2 - CONTRIBUTES POLLUTION, DIRECT - #19, 4

8 - CONTRIBUTES POLLUTION, INDIRECT - #6, 11,12, 28, 29, 31, 32, 37

0 - CP (Kitchen or Laundry Wastes), Direct - None

2 - CP (Kitchen or Laundry Wastes), Indirect - #18, 30

0 - NO FACILITIES, DIRECT - None

14 - NO FACILITIES, INDIRECT - #2, 3, 4, 5, 7, 8, 9, 10, 13, 14, 15, 25, 27. 39

26 - B.2. TOTAL

**3. POTENTIAL POLLUTION -**

Periodic surveillance of these properties will be maintained to determine any status change.

11 - POTENTIAL POLLUTION - #7, 10, 11, 13, 14, 16, 18, 21, 20, 23, 49

**SECTION C: NON-SEWAGE WASTE SITES****1. INDUSTRIAL WASTE SITES**

1 - DIRECT - #48

2 - INDIRECT - #40, 49

3 - C. 1. TOTAL

**2 SOLID WASTE SITES**

0 - DIRECT - None

1 - INDIRECT - #10

1 - C. 2. TOTAL

**SECTION D: BOATING ACTIVITY**

1 - MARINAS - #49

7 - OTHER PLACES WHERE BOATS ARE MOORED - #20, 21, 22, 23, 24, 26, 48

0 - UNDER SURVEILLANCE - None

8 - D. TOTAL

**SECTION E: CONTRIBUTES ANIMAL POLLUTION**

4 - DIRECT - #41,42,44,46

2 - INDIRECT - #38, 45

6 - E. TOTAL



